UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

SEP 17 1993

Mr. Orlando Monaco
Naval Facilities Engineering Command
Northern Division
Environmental Restoration Branch
10 Industrial Highway
Lester, Pennsylvania 19113

Re: Naval Air Warfare Center (NAWC), Warminster, PA

Dear Mr. Monaco:

As discussed, I have recently received verbal comments from USGS on the Draft Workplan Addendum for the Area B Hydrogeologic Investigation. These comments are documented in the attached memo from myself to the EPA File dated September 17, 1993. The EPA requests the Navy to address the comments contained in this memo in the Final Workplan Addendum.

The memo references the recommendation to perform geophysical logging. At this time, it appears the EPA can arrange to have USGS perform this logging as part of the subject investigation under an existing agreement between EPA and USGS. We expect the EPA, USGS and the Navy can coordinate as needed to have this logging performed. In addition, the USGS should be able to assist in the oversight of the subject investigation.

With regard to future hydrogeologic investigations by the Navy at NAWC, the EPA recommends that the Navy enter into an agreement with USGS whereby the USGS can directly provide the Navy the necessary technical hydrogeologic services and support. As referenced in the memo, the Navy already receives services and assistance from USGS at a number of sites in Maryland and a site in Virginia. In addition, we recommend the USGS be extended a formal invitation to join the TRC.

With regard to the next meeting of the TRC Technical Subcommittee on September 22, 1993, Ron Sloto will be unable to attend. However, we still look forward to discussing the matters noted above during this meeting.

If you have any questions or comments, please give me a call at 215-597-0549.

Sincerely,

Darius Ostrauskas
Remedial Project Manager

Enclosure (1)

cc: Ron Sloto, USGS
Dave Kargbo
Mindy Snoparsky
Andy Rola, B & V
Ben Mykijewycz
David Kennedy, PADER

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SEP 17 1993

SUBJECT: NAWC Area B Hydrogeologic Investigation - USGS Comments

FROM: Darius Ostrauskas, Remedial Project Manager

TO: File

On September 16, 1993, I discussed the Workplan Addendum for the Area B Hydrogeologic Investigation dated August 1993 with Ron Sloto of the U.S. Geological Survey (USGS). Summarized below is my understanding of Ron's comments on various topics as discussed during the telecon:

1. Monitoring Well Locations and Construction

- A cluster of three additional monitoring wells should be placed between Area B and the former Warminster Municipal Authority supply well located on Reeves Lane (see attached map for location of former supply well and the proposed approximate location of the well cluster). The wells in this cluster should be screened to monitor significant water bearing zones at depth intervals of 0' to 75'; 75' to 150'; and 150' to 250'.

  The actual location and construction of the new monitoring wells should consider the potential pumping effects of the municipal supply well in Northampton Township (see attached map).

  The specs for bentonite/cement grout used for sealing the open borehole below the screen should be provided and be appropriate.

- Wells installed downdip of suspected areas of disposal should be located and screened considering the dip of approximately 12 degrees to the northwest e.g. a well screened at 150' should be located no more than 720 feet northwest of the suspected source area.

- Should a "significant water bearing zone" not be found in the 100' to 150' interval of a "deep well", drilling should proceed as necessary for up to 50 additional feet to find such a zone. The results of geophysical tests (see below) should be used to identify significant water bearing zones to be screened.

- As currently proposed, all new wells will be two inches in diameter. A two (or four) inch well is inadequate for a pumping well. An additional 6 inch well (or wells) could potentially be needed to perform the aquifer pumping tests referred to under Task 10.

2. Groundwater Level Measurements

- Agreement should be reached regarding which wells should actually be monitored for water levels.

  Levels should be measured every 15 minutes if possible and no less often than every hour.

- Levels should be measured for at least one day before the Northampton Township supply well pump is turned off, while this well pump is turned off, and for at least one day after this well pump has been turned back on to identify the impact of the pumping of this well on groundwater flow between Area B and the supply well. These readings should be taken during the middle of the three week water level monitoring period and should not be taken close to a rain event.

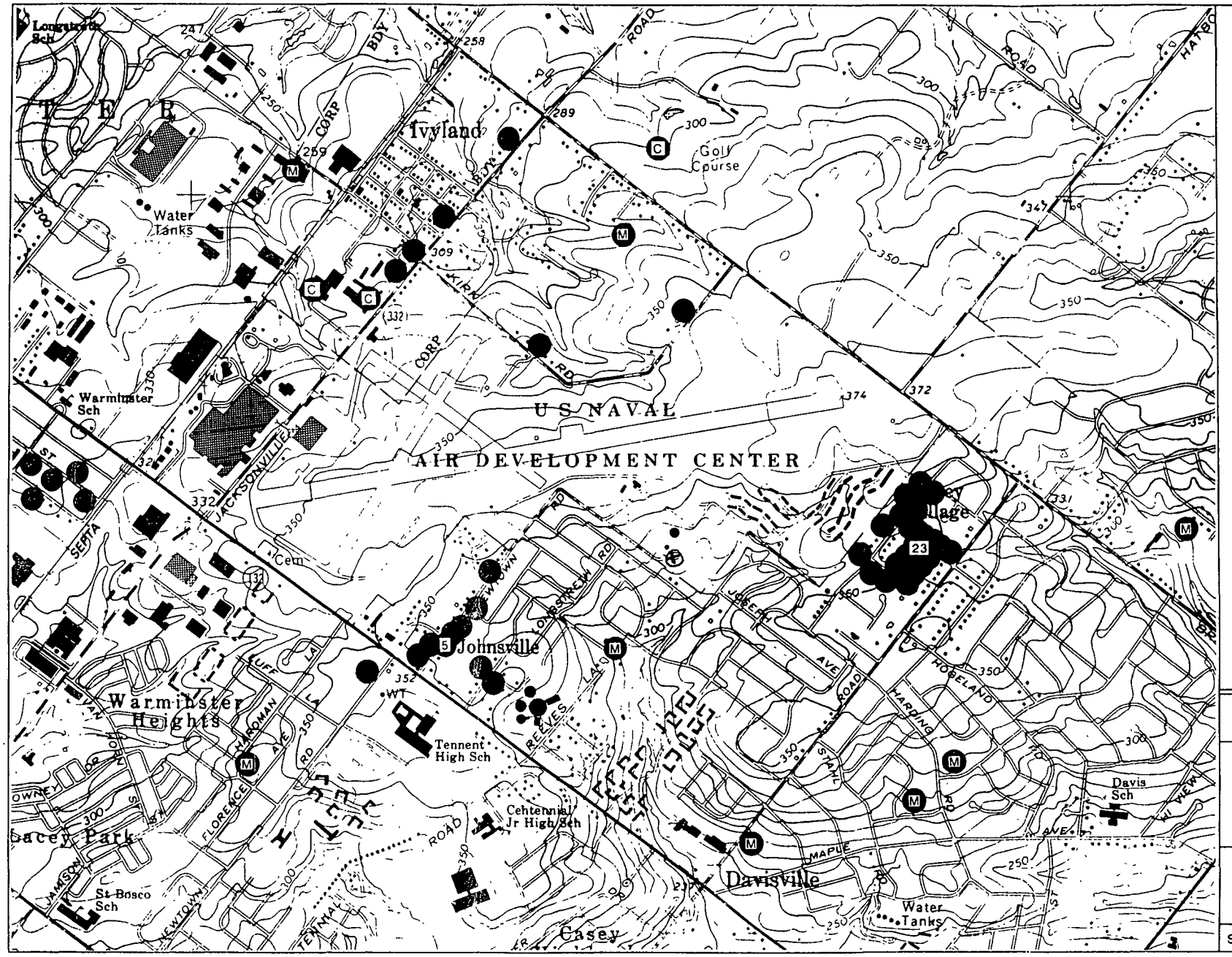
3. Geophysical Tests

   Caliper, natural gamma ray and single point resistance logs should be performed on all monitoring wells. In addition, the performance of fluid resistivity logs, fluid temperature logs and borehole television should be considered. Generally, about half of commercially available contractors can perform this work in a technically acceptable manner. The USGS could perform this geophysical work for the Area B investigation. The USGS could fully log a cluster of three wells in one day.

We also discussed the fact that USGS is directly assisting the Navy on the investigation of five Navy facilities in Maryland and one in Virginia. Ron said NORTHDIV could call Wayne Sonntag of USGS in Towson, Maryland (410-962-7872) to discuss this USGS assistance.

cc: Ron Sloto, USGS
Mindi Snoparsky
David Kargbo
Andy Rola, B & V

Enclosure to Letter of 9/17/93



LEGEND

- C — COMMERCIAL WELL
- RESIDENTIAL WELL
- M — MUNICIPAL WELL
- 5 — WELL CONCENTRATION

⊗ - new well cluster (approximate location)

N

NAWC
WARMINSTER, PA

FIGURE 3-3
LOCATIONS OF COMMERCIAL MUNICIPAL AND RESIDENTIAL WELLS

HALLIBURTON NUS Environmental Corporation

Adapted From SMC Environmental Services Group, 1991

SCALE: 1" = 1000' | DATE 10/12/92